

Notice of Allowability

Application No.

10/529,777

Examiner

Marcus H. Taningco

Applicant(s)

KAUPPINEN, JYRKI

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to submissions filed 9/23/05.
2. ☒ The allowed claim(s) is/are 14-33.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>9/23/05, 11/1/05</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Amendment

The preliminary amendment has been entered. Original claims 1-13 have been cancelled in favor of new claims 14-33. Claims 14-33 are subject to examination herein.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Matthew Schneider on 12/8/06.

The application has been amended as follows:

Claims 15, 16, and 18-23 depend upon claim 14.

Claim 17 depends upon claim 16.

Claims 25 and 26 depend upon 24.

Claim 27 depends upon claim 26.

Claims 28-32 depend upon claim 25.

Allowable Subject Matter

Claims 14-33 are allowed.

The following is an examiner's statement of reasons for allowance:

With regards to claims 14, 24, and 33, the closest prior art considered to be relevant to the present application are:

Kobayashi et al. (US 2003/0002129) describes an optical acoustoelectric transducer for converting vibration displacement of a vibrating board into an electric signal by using light. The board's reflection angle is changed by vibrations due to reception of a sound wave. Accordingly, the vibration displacement of the vibrating board can be detected by detecting a change in the received light amount of the concentrically placed light-receiving elements.

Raz (US 6,210,331) relates to an ultrasonic imaging system, which incorporates an imaging device utilizing confocal acoustic focusing of ultrasonic transducers together with apparatus for moving points of focus of the transducers to scan a volume to be imaged and gather data as to the acoustic reflectivity of matter within the volume. One embodiment of the invention is to sense acoustic signals passing through the pin-hole of the confocal acoustic focusing system. A thin metallized synthetic plastic membrane will provide the cleared properties and vibrate in sympathy with acoustic waves traversing the pin- hole. To monitor vibration of the membrane is to monitor changes in the length of the reflected light path by means of optical interferometry. The optical interferometer has a laser as a source of coherent light. A light beam from the laser is split by a beam splitter, conveniently a half-silvered mirror, which splits the beam into two portions, the first of which is impingent on a reflective surface of the membrane, and the second on a mirror, the reflected beams being recombined by a beam combiner,

Art Unit: 2884

conveniently again a half-silvered mirror, into a single beam impinging on an optical sensor. See column 5, lines 15-58.

None of the prior art cited above teach, or fairly suggest, at least three detectors for receiving light beams coming from the beam splitter, wherein the interferometer is arranged to provide a least three measuring signals in different phase relative to each other.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2884

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MT


CONSTANTINE HANNAHER
PRIMARY EXAMINER